

REMARKS/ARGUMENTS

In view of the foregoing amendments and the following remarks, the applicant respectfully submits that the pending claims are not anticipated under 35 U.S.C. § 102 and are not rendered obvious under 35 U.S.C. § 103. Accordingly, it is believed that this application is in condition for allowance. **If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, the applicant respectfully requests that the Examiner contact the undersigned to schedule a telephone Examiner Interview before any further actions on the merits.**

The applicant will now address each of the issues raised in the outstanding Office Action.

Objections

Claims 4, 5 and 11 are objected to as being dependent upon a rejected base claim, but would be allowed if rewritten in independent form. Since claim 4 has been rewritten in independent form to include the elements of claim 1, it is now in condition for allowance. Since claim 5 depends from rewritten claim 4, it is also in condition for allowance. Claim 11 has not been rewritten at this time since it depends from claim 10 which, as amended, is believed to be in condition for allowance.

Rejections under 35 U.S.C. § 112

Claim 3 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Since this claim has been canceled, this ground of rejection is rendered moot and should therefore be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 1, 2 and 6 [and 10] stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,095,700 ("the Negishi patent"). The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Since claims 1, 2 and 6 have been canceled, this ground of rejection is rendered moot with respect to these claims.

Claim 10, as amended, is not anticipated by the Negishi patent because the Negishi patent does not teach voltage detecting means that detect battery voltages respectively at different times under different load conditions for the battery power supply means prior to commencing a print operation, nor does it teach control means that calculate a printing ratio defined by the thermal energy generated by the load based on the number

of loads activated simultaneously and the voltages detected by the voltage detecting means and that control power application duration of the load in accordance with the printing ratio. Claim 10, as amended, is reprinted below with these features depicted in bold typeface:

A printer comprising:
a thermal head for transferring
a plurality of color inks
successively to paper so that a color
image can be printed on the paper
according to image data;
battery power supply means;
voltage detecting means for
detecting a voltage developed from
said battery power supply means; and
control means for feeding power,
which is supplied from said battery
power supply means, to a load at the
timing immediately preceding the
transfer of the color inks to the
paper, then instructing said voltage
detecting means to detect the
voltage, which is developed from said
battery power supply means, at the
predetermined timing immediately
succeeding the feeding of power, and
then performing correction according
to the result of the detection so
that a printing density of inks
transferred from said thermal head
will remain constant irrespective of
whether the voltage developed from
said battery power supply means is
high or low,
**wherein said voltage detecting
means detects battery voltages
respectively at different times under
different load conditions for said
battery power supply means prior to
commencing a print operation, and
wherein said control means
calculates a printing ratio defined
by the thermal energy generated by**

**the load based on the number of loads
activated simultaneously and the
voltages detected by said voltage
detecting means and controls power
application duration of the load in
accordance with the printing ratio.**
[Emphasis added.]

Each of these features is addressed below. First, however, the Negishi patent is introduced.

The Negishi patent detects a battery voltage and adjusts a drive time period of elements of a thermal printing head accordingly. (See, e.g., the Abstract.) More specifically, if the battery voltage becomes lower, the thermal head is driven longer. A 2560 element thermal head is divided into two sections -- one with elements 1-1280 and the other with elements 1281-2560. (See, e.g., Figure 5 and column 5, lines 20-31.) DATA1 and DATA2 signals basically select elements to be driven in the two sections of the thermal print head, while four strobe signals STB1-STB4 drive the selected elements to radiate a desired heat. (See, e.g., column 4, lines 44-49.) Specifically, the thermal elements of the thermal print head are divided into four groups, driven by strobe signals with different phases. When a strobe signal is LOW, any corresponding element selected by the data signal is driven to radiate heat. (See, e.g., column 5, lines 33-38.) The width of the strobe pulse may be adjusted as a function of a detected battery voltage to adjust the amount of heat generated. (See, e.g., Figure 9 and column 7, line 63 through column 8, line 13.) In the Negishi patent, the battery voltage is detected: (i) after a line is printed before the next strobe signal STB1 is changed to LOW (for purposes of

terminating printing if the battery voltage is too low) (See, e.g., column 6, lines 3-8.); and (ii) at the end of a power down period (Ta), and when the pattern of motor driving pulses is changed (Tb, Tc, Td, Te) (See, e.g., column 6, line 44-47 and Figure 6.).

The Negishi patent does not teach voltage detecting means that detect battery voltages respectively at different times under different load conditions for the battery power supply means prior to commencing a print operation, nor does it teach control means that calculate a printing ratio defined by the thermal energy generated by the load based on the number of loads activated simultaneously and the voltages detected by the voltage detecting means and that control power application duration of the load in accordance with the printing ratio. Examples of these features are described starting at page 64, line 13 with respect to Figures 8-14 of the above-captioned application. The Negishi patent does not teach these features. Accordingly, claim 10, as amended, is not anticipated by the Negishi patent for at least this reason.

Rejections under 35 U.S.C. § 103

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the Negishi patent in view of U.S. Patent No. 4,449,137 ("the Inui patent"). The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

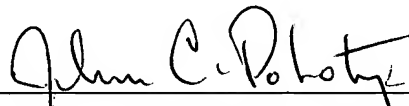
Since claim 3 has been canceled, this ground of rejection is rendered moot and therefore should be withdrawn.

Conclusion

In view of the foregoing amendments and remarks, the applicant respectfully submits that the pending claims are in condition for allowance. Accordingly, the applicant requests that the Examiner pass this application to issue.

Respectfully submitted,

January 6, 2004



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CERTIFICATE OF MAILING under 37 C.F.R. 1.8(a)

I hereby certify that this correspondence is being deposited on **January 6, 2004** with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



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